<u>IN THE CLAIMS</u>

Please amend the claims as follows:

1   (original)   A method of encoding a sequence of frames
        comprising the steps of:

- dividing the sequence of frames into groups of input frames (F1-
  F8),

- one level spatial wavelet-based filtering (SF) the frames of a
  group to generate a first spatial subband (S1) of a first
  decomposition level comprising low-low spatially filtered frames
  (LLs) with reduced size compared to the input frames,

- doing motion estimation (ME1) on pairs of the low-low spatially
  filtered frames (LLs), resulting in a set of motion vector
  fields,

- motion-compensated temporal wavelet-based filtering (MCTF) the
  low-low spatially filtered frames (LLs) based on the set of
  motion vector fields, resulting in a first temporal subband
  (ST1) of a first decomposition level comprising temporally
  filtered frames (LLsLt-LLsHt),

- repeating the three preceding steps, the spatial filtering step
  being adapted to generate a first spatial subband of a second
  decomposition level (STS11) on the basis of low frequency
  temporally filtered frames (LLsLt), the motion estimation and

motion-compensated temporal filtering being applied to frames of said first spatial subband of the second decomposition level.

2   (original) An encoding method as claimed in claim 1, wherein a sequence comprising the spatial filtering step, the motion estimation step and the motion compensated temporal filtering step is iterated until the temporal subband of a predetermined decomposition level only comprises one low temporal frequency frame, inputs for the sequence of steps being, at each iteration, temporally filtered frames (LLsLtLLsLt) having the lowest frequency in both temporal and spatial domains.

3   (original) An encoding method as claimed in claim 1, wherein a sequence comprising the spatial filtering step, the motion estimation step and the motion compensated temporal filtering step is iterated until a certain amount of computational resources are used, inputs for the sequence of steps being, at each iteration, frames having the lowest frequency in both temporal and spatial domains.

4   (original) An encoding method as claimed in claim 1, wherein the one level spatial filtering step (SF) is adapted to deliver at least one other spatial subband (S2-S4, STS12-STS14) of

a current decomposition level, said method further comprising a step of motion-compensated temporal filtering frames of the at least one other spatial subband, re-using a set of motion vector fields of the first spatial subband corresponding to the current decomposition level, and resulting in at least one other temporal subband (ST2-ST4, STST12-STST44) of said current decomposition level.

5   (original)   An encoding method as claimed in claim 4, further comprising a step of pyramidal spatial filtering of spatially filtered frames of the at least one other temporal subband (STS12-STS14, STSTS112-STSTS114) of the current decomposition level.

6   (original)   An encoding method as claimed in claim 1, further comprising a step of pyramidal spatial filtering of spatial low-frequency temporal high-frequency frames (LLsHt, LLsLtLLsHt) of the first temporal subband (ST1, STST11) of a current decomposition level.

7   (currently amended)   An encoding method as claimed in claim 5 or 6, wherein the number of spatial decomposition levels in the pyramidal spatial filtering step at a current decomposition level

is equal to a total number of spatial decomposition levels minus the current decomposition level.

8   (original)   A device for encoding a sequence of frames comprising:

- means for dividing the sequence of frames into groups of input frames (F1-F8),

- means for one level wavelet-based spatial filtering (SF) the frames of a group to generate a first spatial subband (S1) of a first decomposition level comprising low-low spatially filtered frames (LLs) with reduced size compared to the input frames,

- means for doing motion estimation (ME1) on pairs of the low-low spatially filtered frames (LLs), resulting in a set of motion vector fields,

- means for motion-compensated temporal wavelet-based filtering (MCTF) the low-low spatially filtered frames (LLs) based on the set of motion vector fields, resulting in a first temporal subband (ST1) of a first decomposition level comprising temporally filtered frames (LLsLt-LLsHt),

- the three preceding means being configured such that the spatial filtering means are adapted to generate a first spatial subband of a second decomposition level (STS11) on the basis of low frequency temporally filtered frames (LLsLt), and that the

motion estimation and motion-compensated temporal filtering means are adapted to receive frames of said first spatial subband of the second decomposition level.

9 (original) A computer program product comprising program instructions for implementing, when said program is executed by a processor, an encoding method as claimed in claim 1.